MILL CREEK
ENVIRONMENTAL SERVICES

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Superfund Section

November 5, 2014

Mr. John Walch
Inactive Hazardous Sites Branch
North Carolina DENR
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: **Remedial Investigation Report and Remedial Action Plan**
Apex Village
500-610 E. Williams Street
Apex, North Carolina 27502
DENR IHSB Site ID: NONCD0002946

Dear Mr. Walch,

Mill Creek Environmental Services, Inc. (MCES) has completed a Remedial Investigation Report and Remedial Action Plan on behalf of New Falls Property, LLC for the subject property. We request eligibility for voluntary remedial action in the North Carolina Department of Environment and Natural Resources (DENR) Registered Environmental Consultant (REC) Program. This report includes information presented in general accordance with guidance from the DENR Inactive Hazardous Sites Program Guidelines for Assessment and Cleanup (January 2014).

The following is a summary of investigations conducted at this property:

- A former UST system comprised of three (3) USTs was closed by removal in 1993. A 1999 report documented groundwater petroleum concentrations below applicable standards and a request for No Further Action was submitted. The UST system is currently listed as "Closed Out" in the North Carolina UST database. The location of the former UST system is illustrated on Figure 3.
- A 2,000 gallon diesel UST was identified on the subject property. MCES coordinated closure by removal of this UST and submittal of a UST Closure Report to DENR. In a letter dated May 30, 2013, DENR assigned incident number 39346 and approved No Further Action for this UST. The former location of the 2,000 gallon diesel UST is illustrated on Figure 3.
- A 250 gallon used oil UST was identified on the subject property. MCES coordinated closure by removal of this UST and submittal of a UST Closure Report to DENR. In a letter dated May 30, 2013, DENR assigned incident number 39341 for this UST and requested a Limited Site Assessment based on soil concentrations in excess of applicable standards. MCES conducted the LSA, including installation and sampling of permanent monitoring well MW-4

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and requested No Further Action based on contaminant concentrations below the North Carolina Gross Contamination Levels (GCLs). DENR approved No Further Action for this UST in a letter dated October 8, 2013. The former location of the 250 gallon used oil UST is illustrated on Figure 3.

- A subsurface investigation was conducted downgradient of a drycleaner business located on the subject property. Results of this investigation found no indication of chlorinated ethenes downgradient of the drycleaning business.
- Geoprobe investigations for soil indicated detection of naphthalene in sample (SB-2, 4-8') at a concentration of 1.01 mg/kg, exceeding the NC DENR UST Soil to Water Maximum Contaminant Concentration of 0.16 mg/kg. The naphthalene concentration was addressed in the LSA investigation described above and was not considered applicable in determining contaminants of concern for the subject property with regard to requirements of DENR IHSB.
- Geoprobe investigations for groundwater indicated exceedance of applicable groundwater standards for naphthalene, tetrachloroethene (PCE), and bis (2-ethylhexyl) phthalate. The naphthalene exceedance was addressed in the LSA investigation described above and naphthalene was not detected in subsequent investigations at other locations on the site. Bis (2-ethylhexyl) phthalate contamination was attributed to site contamination by plastics and construction materials, and was not considered applicable in determining contaminants of concern for the subject site. Further investigations did not analyze for bis (2-ethylhexyl) phthalate.
- PCE was detected above the applicable standard at two preliminary sampling locations in March of 2013; GW-2 (the location of the removed 250 gallon UST described above), and SB-6 (approximately 140 feet east of GW-2). Based on the Geoprobe sampling results, a permanent network of monitoring wells was installed to delineate the horizontal extent of PCE in groundwater.
- The permanent monitoring well network indicated the presence of a low concentration chlorinated ethene plume that included PCE, trichloroethene (TCE) and cis-1,2-dichloroethene (DCE) in groundwater. Based on sampling results, the chlorinated ethene plume appears to be contained within the subject property boundaries. The concentrations of PCE and TCE exceeded their respective DENR Groundwater Quality Standards (GQS) with detected high concentrations of 30.4 ug/l for PCE and 14.6 ug/l for TCE. Concentrations of DCE were below the GQS.
- Possible source areas include non-point-source drips and spills associated with Southern Tire and Auto and a lawnmower repair business that is rumored to have operated immediately south of the Quest Auto Parts building. Although a drycleaning operation previously existed on the property upgradient of the chlorinated solvent plume, groundwater analytical results indicated the former drycleaning operation was not a likely source.

- Regulated compounds were not detected in samples collected from the intermittent stream located within the subject property at the approximate downgradient extent of the dissolved contaminant plume.
- No public or non-public drinking water wells were identified within 0.5 miles of the subject property.
- Assessment of natural attenuation parameters in groundwater found that bioremediation through reductive dehalogenation appears to be active in the surficial aquifer at the property. Computer modeling of the chlorinated ethene contaminant plume using Biochlor also indicated that natural attenuation activity is occurring at the subject site. The Biochlor model indicated that PCE at the location of MW-3 would decrease to below the GWQS in the year 2017.
- MCES evaluated groundwater remedial methods and monitored natural attenuation (MNA) was selected as the preferred remedial action method for groundwater at the subject property.

The investigation of the chlorinated ethene plume on the subject property is complete and was conducted in general accordance with the North Carolina Inactive Hazardous Sites Program Guidelines for Assessment and Cleanup (January 2014). The Remedial Investigation Report and Remedial Action Plan for the subject property are attached. Please review the report and feel free to call the undersigned if you have any questions or comments.

Sincerely,
MILL CREEK ENVIRONMENTAL SERVICES, INC.

David W. Payne, PG
Project Geologist

Daniel L. Centofanti, PG, LG
Program Manager
North Carolina LG No: 1557